

insulator, the floating gate comprising gallium nitride (GaN) or gallium aluminum nitride (GaAlN).

The MPEP states the following with regard to rejections under 35 USC § 103:

"To establish a *prima facie* case of obviousness ... there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings." MPEP 2143. A Federal Circuit opinion states that the suggestion or motivation must be found in the prior art. MPEP 2143 citing *In re Vaeck*, 20 USPQ2d 1438, 1442 (Fed. Cir. 1991). In addition, the Federal Circuit, in *In re Lee*, 61 USPQ2d 1430 (Fed. Cir. 2002), requires that the suggestion or motivation "be based on objective evidence of record." The Federal Circuit also indicated that the suggestion or motivation must be specific. 61 USPQ2d at 1433.

The Office Action states that "Hori does not explicitly show a floating gate and a control gate." However, the Office Action has not stated specifically how Hori is being modified to reject claims 24, 30, 32-33, 37-38, 42-43, 47-48, 52-53, and 57-58 under § 103, and the Office Action did not identify any prior art evidence as the source of a suggestion for modifying Hori.

The applicant respectfully submits that a *prima facie* case of obviousness of claims 24, 30, 32-33, 37-38, 42-43, 47-48, 52-53, and 57-58 has **not** been established in the Office Action, and that claims 24, 30, 32-33, 37-38, 42-43, 47-48, 52-53, and 57-58 are in condition for allowance.

In the response filed on 16 September 2002, the applicant argued that Hori only shows *specific combinations* of materials for the device shown in Figure 15(a). The applicant quoted Hori in support of this argument, and hereby incorporates that argument. None of the combinations shown by Hori include either GaN or GaAlN and SiO<sub>2</sub>. The Office Action cited text from column 11 of Hori:

"Concrete examples of *combination* of materials for the tunneling barriers 13a, 13b, low barrier region 12 and storage regions 11a, 11b include AlAs and GaAs, GaAlAs and GaAs, SiO<sub>2</sub> and SiC, Si<sub>3</sub>N<sub>4</sub> and Si, GaAlN and GaN, Si and SiGe, in addition to the foregoing combination SiO<sub>2</sub> and Si in Example 1." [Emphasis Added] Hori, column 11, lines 37-44.

This text indicates a combination of GaAlN and GaN in the same structure, and does not include SiO<sub>2</sub> with GaAlN or GaN.

Claims 25-26, 31, 34-36, 39-41, 44-46, 49-51, 54-56, and 59-61 were rejected under 35 USC § 103(a) as being unpatentable over Hori as applied above in view of Major et al. (U.S. Patent Number 6,130,147, Major). The applicant respectfully traverses.

Hori is deficient as a reference for the reasons stated above with respect to the rejection of claims 24, 30, 32-33, 37-38, 42-43, 47-48, 52-53, and 57-58. Major does not supply the elements missing in Hori.

For reasons analogous to those stated above, and the limitations in the claims, the applicant respectfully submits that a *prima facie* case of obviousness of claims 25-26, 31, 34-36, 39-41, 44-46, 49-51, 54-56, and 59-61 has **not** been established in the Office Action, and that claims 25-26, 31, 34-36, 39-41, 44-46, 49-51, 54-56, and 59-61 are in condition for allowance.